

EXCERPTS FROM THE STATUTE RELATING TO THE  
NAVAL JUNIOR RESERVE OFFICERS TRAINING CORPS

"TITLE 10, UNITED STATES CODE"

"Chapter 102. Junior Reserve Officers Training Corps"

"Section 2031. Junior Reserve Officers Training Corps"

"(a) (1) The Secretary of each military department shall establish and maintain a Junior Reserve Officers Training Corps, organized into units, at public and private secondary educational institutions which apply for a unit and meet the standards and criteria prescribed pursuant to this section. Not more than 200 units may be established by all of the military departments each year beginning with the calendar year 1966, and the total number of units which may be established and maintained by all of the military departments under the authority of this section, including those units already established on the date of enactment of this section, not exceeding 3,500. The President shall promulgate regulations prescribing the standards and criteria to be followed by the military departments in selecting the institutions at which units are to be established and maintained and shall provide for the fair and equitable distribution of such units throughout the Nation, except that more than one such unit may be established and maintained at any military institute.

"(2) It is a purpose of the Junior Reserve Officers Training Corps to instill in students in the United States secondary educational institutions the values of citizenship, service to the United States, and personal responsibility and a sense of accomplishment.

"(b) No unit may be established or maintained at an institution unless:

"(1) the number of physically fit students in such unit who are in a grade above the 8<sup>th</sup> grade and are citizens or nationals of the United States or aliens lawfully admitted to the United States for permanent residence in not less than (A) 10 percent of the number of students enrolled in the institutions who are in a grade above the 8<sup>th</sup> grade or (B) 100, whichever is less;

"(2) the institution has adequate facilities for classroom instruction, storage of arms and other equipment which may be furnished in support of the unit, and adequate drill areas at or in the immediate vicinity of the institution, as determined by the Secretary of the military department concerned;

"(3) the institution provides a course of military instruction of not less than three academic years' duration, as prescribed by the Secretary of the military department concerned; and

"(4) the institution agrees to limit membership in the unit to students who maintain acceptable standards of academic achievement and conduct, as prescribed by the Secretary of the military department concerned.

"(5) the unit meets such other requirements as may be established by the Secretary of the military department concerned.

"(c) The Secretary of the military department concerned shall, to support the Junior Reserve Officers Training Corps program:

"(1) detail officers and noncommissioned officers of an armed force under his jurisdiction to institutions having units of the Corps as administrators and instructors;

"(2) provide necessary text materials, equipment, and uniforms; and to the extent considered appropriate by the Secretary concerned, such additional resources (including transportation and billeting) as may be available to support activities of the program.

"(3) establish minimum acceptable standards for performance and achievement for qualified units.

"(d) Instead of, or in addition to, detailing officers and noncommissioned officers on active duty under subsection (c) (1), the Secretary of the military department concerned may authorize qualified institutions to employ, as administrators and instructors in the program, retired officers and

noncommissioned officers, and members of the Fleet Reserve, and Fleet Marine Corps Reserve, whose qualifications are approved by the Secretary and the institution concerned and who request such employment, subject to the following:

"(1) A retired member so employed is entitled to receive the member's retired or retainer pay without reduction by reason of any additional amount paid to the member by the institution concerned. In the case of payment of any such additional amount by the institution concerned, the Secretary of the military department concerned shall pay to that institution the amount equal to one-half of the amount paid to the retired member by the institution for any period, up to a maximum of one half of the difference between the member's retired or retainer pay for that period and the active duty pay and allowances which the member would have received for that period of active duty. Notwithstanding the limitation in the preceding sentence, the Secretary concerned may pay to the institution more than one-half of the additional amount paid to the retired member by the institution if (as determined by the Secretary) the institution is in an educationally and economically deprived area and the Secretary determines that such action is in the national interest. Payments by the Secretary concerned under this paragraph shall be made from funds appropriated for that purpose.

"(2) Notwithstanding any other provision of law, such a retired member is not, while so employed, considered to be on active duty or inactive duty training for any purpose.

GUIDANCE FOR INSTRUCTORS FOR ESTABLISHING  
AND OPERATING AN NJROTC UNIT

1. Introduction. The commissioning of a ship or facility presents its own special issues, and establishing an NJROTC unit is no exception. The myriad of details unique to the NJROTC program is normally unfamiliar to the new instructors. The broad guidance that follows is intended to place some of the issues in perspective and to give new instructors the benefit of solutions to several. The guidance provided in the area of logistics is particularly detailed to assist the SNSI/NSI in expediting the formation of the unit, and to permit operating units an opportunity to review their procedures for authorized shortcuts.

2. Initial Information and Staffing. The basic information required to organize and establish an NJROTC unit is found in this Appendix. Ideally, the SNSI/NSI should be employed as soon as possible after the school has been selected. This will give him/her an opportunity to prepare the spaces assigned during the site visit by the CNET Expansion Coordinator: offices, classroom(s), storage, armory, and marksmanship range if available. Expedient hiring also creates an opportunity to meet with the faculty and student body in order to discuss the program. If neither the SNSI nor NSI has been employed during this phase, the area manager will assume these tasks.

3. Community/School Relations. It is important to acquaint the administrators, counselors, teachers, the student body, parents, and the community in general as early as possible regarding the mission, curriculum, and goals of the NJROTC program. Many do not know anything about the program, and some even believe that the unit is only devoted to marching. Faculty meetings, student body assemblies, and articles in the school and local newspapers would be appropriate vehicles to "pass the word." The SNSI/NSI should check with the principal to determine proper procedures. Acceptance of the program by both the faculty and the student body is tantamount to success. This can only be accomplished by keeping them informed.

4. Preparation for the First Days of School. Particularly for a newly selected NJROTC school, the program will be under close

scrutiny by the students, the faculty, and the community. Careful and complete preparation by the SNSI/NSI will preclude any "false starts" which would hurt the program. In addition to becoming thoroughly familiar with the curriculum, NJROTC procedures, regulations, etc., timely preparation is imperative in the following areas:

a. Uniforms. Requisition of uniforms, insignia, equipment, and supplies must be carefully itemized and requested in order to have all onboard for the first day of school. Uniforms are very important to the morale of a unit, and there is nothing more detrimental to this morale than having to wait several weeks for the privilege of wearing them. Adequate numbers, in the various sizes can be ordered in advance even if exact sizes are unknown. Each cadet is required to purchase

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their socks or stockings (to be worn with all uniforms). Allow up to 4 weeks for delivery of clothing items from the Navy Exchange Command (NEXCOM).

b. Uniform Alterations and Insignia. For uniformity and accuracy of required alterations and insignia placement, it is best to contract with one local tailor. Give the tailor a set of instructions and diagrams and send each cadet with specific directions for alterations, etc. Arrange for payment through the school system, and submit a claim for the reimbursement to NJROTC Accounting (NETPDTC N8111) in accordance with Chapter XV.

c. Sword Authorized Allowance. Only cadets LTJG and above rate swords. Thus, for a company size unit (with rifle team), a total of six swords is authorized. ???

d. Instructional Materials and Equipment. All instructional material and equipment necessary to conduct the Naval Science 1 curriculum will be sent to the school based on 125 percent of NS-1 projected enrollment estimated by the area manager. Reference publications and training aids for the entire 4-year curriculum will also be provided. Books, charts, maps, wall charts, plotting sheets, answer sheets, and certain training aids furnished by NJROTC Supply are listed in the NJROTC Annual Instructional Materials Report in JUMS. Requests for

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items that exceed listed allowances or are not listed are to be submitted to CNET (NJROTC) for approval with justification supporting the requirement.

e. Drill Rifles. Provide a suitable and secure storage area. The NJROTC Supply Manual (NAVEDTRA 37123) contains details on obtaining and providing security for drill rifles. Seek the help of the shop teachers in preparing the facilities to meet security requirements. Drill rifles will be shipped to the unit as start up equipment. SNSIs must verify serial numbers received on packing slip, sign for receipt and date of receipt on the packing slip and fax to NJROTC Supply.

f. Air Rifles. An air rifle marksmanship program is optional. Written approval from a school official, usually the principal, on school letterhead is required. The letter is to be submitted to CNET (NJROTC) via the area manager. Air rifle authorizations for reimbursement are issued to host schools annually by CNET based on availability of funds.

g. Record Keeping. Proper and accurate records are essential to having a successful program. All necessary forms are available through area manager.

h. Accounting. For procuring all the equipment described in previous paragraphs, routine accounting procedures are to be followed. These include maintaining records, reports, receipts, inventories, and files; completing and forwarding receipts; conducting inventories upon receipt, upon change of SNSI/NSI, and annually thereafter; submitting required reports as prescribed in Chapter 9; ensuring security of stowage; and disposing of outdated, unusable or excess equipment when necessary. Permission for such disposal must be obtained from the area manager.

i. NJROTC Unit Flag. An NJROTC unit flag will be supplied in kit form in order to save costs. The kit is to be put together by the local unit. ???

5. Extracurricular Activities. A successful NJROTC program is one in which good discipline exists, and in which the cadets are required to study, take exams, and complete a term paper or project in the naval science area. However, there are many

worthwhile extracurricular activities as well. In addition to basic leadership training camps, at-sea cruises, leadership academics, field meets, and trips to naval facilities, local area field trips should be made to broaden cadet knowledge related to the naval science curriculum (see Appendix 6)???. A formal military ball is also highly recommended as an annual event.

6. Liaison with Activities in the Area. The overall program can be helped by establishing close relationships/communications with parents, community organizations, and area activities, particularly if the school is relatively close to naval/military installations. In addition to minor supply support, there is a wealth of talent available as guest speakers for the NJROTC classes. These installations are ideal locations for field trips.

7. Counseling. The SNSI/NSI will find themselves questioned often by cadets, not only from those interested in service careers, but by those with personal problems as well. This is a very sensitive area, and the SNSI/NSI should proceed with caution. No guidance can be given other than the admonition not to infringe on the functions of the regular school counselor. When in doubt, check with the Guidance Department in the school.

8. Faculty Relationships. As employees of the school system, the SNSI/NSIs are members of the faculty, and are expected to participate in school activities along with other faculty members. The SNSI is the Head of the Naval Science Department, and is expected to confer on a continuing basis with the principal regarding the administration of the department. Among these points will be reimbursement procedures for salaries, field trips, etc.

9. Activation Ceremony. At a convenient time, the NJROTC unit should be formally activated. A formal "activation ceremony" on a date coordinated through the principal's office, and preferably toward the end of the spring semester, is highly recommended. This will give ample time to become oriented, and will provide a vehicle for official recognition of outstanding performances on the part of certain cadets. An official scroll,

signed by the Chief of Naval Education and Training, will be presented. Suggested components of the ceremony include:

- a. Band selections (pre-ceremonial)
- b. Invocation
- c. Introduction of guests and dignitaries by host officials
- d. Presentation of colors
- e. National Anthem
- f. Introduction of and remarks by senior Navy representatives
- g. Reading and presentation of the unit charter
- h. Band selections
- i. Remarks by host school official
- j. Remarks by community official
- k. Pass in review
- l. Benediction
- m. Band selections (post-ceremonial)



SAMPLE LETTER FOR SUBMISSION OF ADDRESS INFORMATION

\_\_\_\_\_  
NJROTC Unit Identification Code

\_\_\_\_\_  
(School Name)

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City, State, and ZIP Code)

\_\_\_\_\_  
(Date)

Mail to: CNET (NJROTC)  
INSTRUCTOR PAY  
250 DALLAS ST  
PENSACOLA FL 32508-5220

Dear Sir:

The following addresses are provided for the mailing of NJROTC reimbursement checks for the above named school:

- a. Mailing address for salary reimbursements:
- b. Mailing address for the annual miscellaneous check:
- c. Mailing address for all other authorized reimbursements (including orientation, uniform maintenance, instructor travel, and equipment purchases):

\_\_\_\_\_  
(signature of school official)

\_\_\_\_\_  
(title)

FIELD TRIPS AND ORIENTATION CRUISES AND FLIGHTS  
AFLOAT AND ASHORE

1. General. In order to enhance the instructional program so as to make classroom presentations more interesting and meaningful, full utilization of extended field trips and orientation cruises or flights, afloat and ashore, is strongly recommended. Such utilization will provide practical application of many of the topics discussed, as well as provide increased desire of the cadets to participate more fully in the NJROTC program.

2. Extended Field Trips. Participation in the host school's extended field trip program is possible and well advised. Procedures, regulations, and applications are usually available through the office of the principal.

3. Navy Orientation Cruises and Flights. Coordinate visits to military installations through the area manager. If your unit takes a trip to another NJROTC area, ensure that both the area managers are kept informed.

a. A Release Form (TAB A) must be used for all NJROTC trips. The notary block is provided for use in states which require notarization of signature. You must also consider laws of states through which you pass and where the host base is located.

b. DoD Directive 4515.13 series (Orientation Flights) provide for local military flights on a not-to-interfere basis. Cadets in uniform may take a local flight during the regular school year as members of an organized NJROTC activity. Parental consent must be obtained in writing for each participating cadet. Chaperons for approved NJROTC field trips involving DoD airlifts are authorized to fly and must complete the same administrative requirements as the cadets. A waiver to OPNAVINST 4630.25, Transportation Eligibility Requirements, is granted to all chaperons so designated by the Senior Naval Science Instructors in charge of the approved field trip.

c. DD Form 1381, Air Transportation Agreement (TAB B), must be completed for each cadet flying in a government

aircraft. If the cadet is under age 18 at the time of departure, the DD 1381 must be signed by the parent or legal guardian.

4. Guidelines. Having obtained approval for an extended field trip orientation cruise or flight, the SNSI/NSI should carefully consider the opportunities presented for enhancement of the naval science curriculum.

a. As guests, the cadets are to demonstrate those qualities of leadership, discipline, and appearance expected of any member of the naval service. Ensure cadets are in proper NJROTC uniform at all times while utilizing government transportation and on board government facilities, except while engaged in recreational activities. The SNSI should make every effort to ascertain what the uniform of the day is in the particular locale their group is visiting.

b. The SNSI/NSI should be prepared, as well as cadets, by reviewing the Bluejackets Manual and by carrying out the following:

(1) Select mature, well-qualified adults for chaperons and brief them regarding the facilities and special host requirements to be expected. It is highly recommended, whenever possible, that chaperons be school officials.

(2) Adhere to the cadet/chaperon ratio requirement established by the host activity.

(a) Normally 20:1

(b) If lower than 20:1, prepare accordingly.

(c) When female cadets participate in the activity, ensure that female chaperons are at the required ratio. A minimum of two female chaperons should be selected if 20 or fewer female cadets are participating. This allows one female chaperon to stay with the main party should it be necessary for the other female chaperon to accompany a female cadet in case of emergency.

(d) SNSIs/NSIs shall utilize the same transportation as cadets and shall not delegate this responsibility.

(3) Select the cadets to participate. There is no requirement that all members of a unit attend. Remember, those who do participate represent the Navy, the unit, the school, and the instructors responsible.

(4) Prepare cadets for any special requirements of the host activity. Bear in mind that obligations as a guest include minimum interference with the mission and training schedules of the host. Special requirements include, but are not limited to:

- (a) Taps and reveille
- (b) Chaperons (SNSI/NSI, etc.) berthing with cadets
- (c) Meal hours
- (d) Tour schedules (if any deviations arise, keep the host activity informed, using the chain of command)
- (e) Safety regulations for personnel and equipment. (do not rely solely on the "common sense" approach. All military activities have special hazards with which the cadets and chaperons may not be familiar.)

(5) The host activity will generally be prepared for emergencies. However, ascertain that all participants are insured, and that a Standard Release Form (TAB A) is completed for each cadet.

(6) Be prepared for delays.

(7) Encourage the participants to plan specific projects for which the information can be obtained at the host activity.

(8) Enjoy your opportunity to renew your acquaintance with the military and to increase your understanding for recent developments.

(9) Send a letter of appreciation and thanks for the assistance rendered, naming specific personnel assigned to escort and/or orient the unit. Obtain names, titles, etc., as the field trip or cruise progresses.

c. NJROTC cadets and chaperons shall not be left stranded for any return from a Navy-sponsored field trip or cruise. Keep your area manager and the area manager of the area to which the unit is raveling informed. If there is any doubt about resources sufficient to guarantee return home, the original request may be denied even though a "confirmation" has been provided.

5. Reimbursement. Refer to Chapter XV for procedures.

6. Airlifts. The requesting unit's area manager shall coordinate airlift support. The area manager of the host-training site should be included in all message traffic concerning airlifts and visits.

NOTE: The following instructions are relevant and may be cited for airlift support authorization: OPNAVINST 5760.2 series (Subj: POLICY AND RESPONSIBILITY FOR NAVY YOUTH PROGRAMS AND NAVY SUPPORTED YOUTH ORGANIZATIONS) and OPNAVINST 4631.2 series (Subj: MANAGEMENT OF BASE AND COMMAND SUPPORT AND FLEET LOGISTICS SUPPORT AIRCRAFT).

TAB A - Standard Release Form

TAB B - Air Transportation Agreement

NJROTC NATIONAL ACADEMIC COMPETITION1. General

a. The annual NJROTC National Academic Competition is usually held on or about 1 February. This competition is held to promote and recognize outstanding academic achievement among NJROTC cadets and units.

b. Naval science instructors desiring to have their units participate will notify their area managers of the number of teams (maximum of five) they intend to enter into competition by early December or other due date set by their area managers. Area managers will provide a list of all schools and numbers of teams intending to compete to CNET (NJROTC Curriculum) by mid-December. The guidance and procedures under which this competition will be conducted are outlined below. The test packet(s) and the instructions to be followed when giving the examination and completing the answer sheets will be sent directly to the high school principal for safekeeping until the day of the test.

c. The first, second, and third place teams will be awarded a plaque, and their respective team members will be awarded a medal by the Chief of Naval Education and Training.

d. Cadets who have competed in academic competition are authorized to wear the Academic Award Ribbon and subsequent awards as earned.

2. National Academic Competition Regulations and Procedures

a. Teams. Academic teams will consist of five members each. There are no restrictions as to team composition. Units may have up to five teams compete. Although this is a team competition, each team member must read the test booklet and complete the answer sheet by himself/herself.

b. Test. The test will contain 100 multiple-choice questions based on NS-1, NS-2, and NS-3 course material (approximately one-third each). There will be five different test booklets for

each team. To avoid team disqualification, each team member must take the test from a different booklet number. Test administration time limit is 50 minutes. The test must be administered to the unit team(s) at one setting.

c. Rescheduling. Although the examination is scheduled for 1 February, a unit may reschedule this examination earlier or later, only as authorized by the area manager. Rescheduling the examination date is permitted should other school activities conflict with the national test date, or should the unit feel more or less time is needed to mail the answer sheets to CNET so as to meet the scoring deadline set by CNET. Answer sheets arriving after the scoring deadline will not be scored.

d. Answer Sheets. NJROTC optical scan answer sheets (CNET Form 1500/23 (Rev. 9-94), NAVEDTRA 37085) will be utilized. Naval science instructors must request the number of answer sheets needed from the area manager. Do NOT use copies of the answer sheet. The CNET optical scanner will not score photocopies of the answer sheet.

e. Test Handling Procedures. Sealed test packets and exam administration instructions will be sent by CNET directly to the school principal of each competing unit. Test packets will be stored by the principal or other school official until the day of the exam, when the packets will be turned over to the SNSI. The SNSI will then open the test packets and follow the exam administration instructions provided by CNET.

f. Grading. The value of each item on the test varies according to its degree of difficulty, computed by dividing the total number of incorrect responses of all participants to the item by the total number taking the test. Each correct answer receives its item value; no value is assigned to items not answered. To correct for guessing, the total of item values for questions answered correctly will be reduced by 25 percent of the sum of item values of questions answered incorrectly. This is the raw score. Raw scores will be converted to percentile ranks for convenience in comparing performance.

g. Results. Test results will be sent to the area managers for distribution no later than 1 April. Each team will be able

to judge their performance on (1) a national level against all the teams in the competition, (2) an area level against just the teams in their area, and (3) their individual correct/incorrect item response ratio.

### 3. General and Verbatim Instructions for the Administration of the Test

#### a. Instructions to the Senior Naval Science Instructor Prior to Administration

(1) On the day of the test, obtain test packet(s) from principal or other school official having custody. Open test packet. There should be sufficient test booklets for the members of your academic team(s). There will be five different, individually serialized test booklets for each team. Check to make sure that the number of test booklets received is correct; that there are no missing or illegible pages, and that there is a different test serial number for each member of a team (e.g., 3101, 3102, 3103, 3104 and 3105). Reproduce locally to correct deficiencies if necessary (must be done or observed by SNSI). Treat test booklets as you would classified material until completion of the test.

(2) Provide an adequate supply of NJROTC Answer Sheets (CNET Form 1500/23, Rev 9-93, NAVEDTRA 37085), see TAB A. Do not use copies. Answer sheets may be readied in advance to save time by completing identification data section of the answer sheet.

(3) Provide an adequate supply of No. 2 or softer (i.e., not No. 3) black lead pencils with erasers. No other marking device will be used.

(4) The questions on the five examination booklets are in identical numerical order, but the four alternative answers are in a different order on each exam. Nevertheless, cadets should be seated such that they cannot see another cadet's answer sheet.

(5) Teams may have no more, or fewer, than five members.



(6) Fifty minutes is allowed for completing the test. This time period is in addition to the time used for completing the identification data section of the answer sheet. Cadets should be notified of elapsed time 15 minutes prior to the end of the test period.

(7) Reference may not be made by cadets to any source of information during the test. The team will be disqualified if any evidence of cheating is discovered.

(8) Each answer sheet must contain the following information: (1) Cadet Name, (2) Team Number, (3) UIC Number, and (4) Test Serial Number (see Appendix 1). Do not leave the team number blank when there is only one team being submitted. If this is the case, please instruct the cadets to darken the circle corresponding to the number "1." Any errors of this information on just one of the team answer sheets will result in the disqualification of the entire team.

(9) When academic team(s) members have received their test material and are seated, read aloud the Verbatim Instructions which set forth a step-by-step procedure for completing the answer sheet. Read Verbatim Instructions distinctly and slowly. Allow cadets sufficient time to follow instructions.

b. Verbatim Instructions to Cadets

(Uppercase letters indicate that portion which is to be read aloud to cadets taking the test.)

YOU ARE ABOUT TO TAKE THE NJROTC NATIONAL ACADEMIC COMPETITION TEST.

WAIT FOR INSTRUCTIONS PRIOR TO COMPLETING ANY BLOCKS ON YOUR ANSWER SHEET. ACCURACY IN FILLING OUT YOUR ANSWER SHEET IS REQUIRED IN ORDER THAT YOUR TEST CAN BE PROPERLY SCORED.

YOU SHOULD HAVE IN FRONT OF YOU AN EXAMINATION, AN ANSWER SHEET, AND A NO. 2 OR SOFTER LEAD PENCIL WITH AN ERASER. IF YOU DO NOT HAVE ANY OF THESE ITEMS RAISE YOUR HAND FOR ASSISTANCE.

THE ANSWER SHEET WILL BE READ BY OPTICAL SCANNING EQUIPMENT; THEREFORE, SPECIAL CARE MUST BE TAKEN IN HANDLING AND COMPLETING THESE FORMS. ANY ERRORS OF IDENTIFICATION ON AN ANSWER SHEET WILL RESULT IN THE DISQUALIFICATION OF THE ENTIRE TEAM.

DO NO BEND, FOLD, OR MUTILATE YOUR ANSWER SHEET. IF YOU MAKE AN ERROR, BE SURE THAT YOU ERASE IT THOROUGHLY, AS UNNECESSARY MARKS CAN AFFECT THE PROPER SCORING OF YOUR EXAMINATION.

WHEN MARKING OR PRINTING IN THE ANSWER SHEET, THE SHEET MUST BE PLACED ON A HARD SURFACE, NOT ON BOOKS OR PAPERS.

PRINT YOUR LAST NAME, FIRST NAME, AND MIDDLE INITIAL IN THE MARKED SPACES. BLACKEN IN THE CORRESPONDING LETTERS IN THE VERTICAL COLUMNS.

(If more than one team is competing, read the following paragraph.)

**IF A TEAM FROM A CROSS-ENROLLED SCHOOL IS COMPETING, A DIFFERENT TEAM NUMBER MUST BE USED, i.e., WE CANNOT HAVE TWO TEAMS WITH THE SAME TEAM NUMBER FROM THE SAME UIC. HAVING THE SAME TEAM NUMBER WILL RESULT IN THE DISQUALIFICATION OF BOTH TEAMS.**

IN THE UIC BLOCK, ENTER THIS UNIT'S FIVE DIGIT UIC, AND BLACKEN IN THE CORRESPONDING NUMBERS IN THE VERTICAL COLUMNS. (You may wish to write this number on the chalkboard.)

IN THE TEST SERIAL BLOCK, ENTER THE TEST SERIAL NUMBER WHICH APPEARS ON THE FRONT OF YOUR TEST BOOKLET, AND BLACKEN IN THE CORRESPONDING NUMBERS IN THE VERTICAL COLUMNS. INCLUDE ANY ZEROES AS PART OF THE 4-DIGIT NUMBER YOU ENTER.

NOW, DOUBLE CHECK ALL THE INFORMATION YOU HAVE ENTERED AND MARKED. CAREFULLY ERASE ANY ERRORS, OR EXTRA PENCIL MARKS YOU MAY HAVE MADE, AND CAREFULLY MAKE YOUR CORRECTIONS. AGAIN, DO NOT FOLD, BEND, OR MUTILATE YOUR ANSWER SHEET. **REMEMBER, IF ONE OF THE TEAM MEMBERS HAS AN ERROR ON THE IDENTIFICATION PORTION OF HIS/HER ANSWER SHEET, THE ENTIRE TEAM WILL BE DISQUALIFIED.** IF YOU HAVE ANY QUESTIONS PLEASE RAISE YOUR HAND FOR ASSISTANCE.

THE ANSWERS TO THIS 100-QUESTION EXAM ARE TO BE ENTERED ON THE ANSWER SHEET. EACH QUESTION ON THIS EXAM HAS FOUR LETTERED RESPONSES, ONLY ONE OF WHICH IS THE CORRECT ANSWER. YOU ARE TO FILL IN ONLY ONE RESPONSE FOR EACH QUESTION. ANY QUESTION ANSWERED BY TWO OR MORE RESPONSES WILL BE SCORED AS WRONG.

THE VALUE OF EACH QUESTION VARIES ACCORDING TO ITS DIFFICULTY; IN OTHER WORDS, THE MORE DIFFICULT THE QUESTION, THE MORE CREDIT YOU GET FOR THAT PARTICULAR ITEM. ALSO, BE CAREFUL ABOUT GUESSING, ESPECIALLY IF YOU HAVE NO IDEA OF WHAT THE ANSWER TO A QUESTION COULD BE. YOUR TOTAL SCORE WILL BE REDUCED AN AMOUNT FOR EACH INCORRECT ANSWER (as explained earlier). HOWEVER, IF YOU ARE NOT CERTAIN OF THE ANSWER BUT CAN ELIMINATE ONE CHOICE AS BEING ENTIRELY WRONG, YOU HAVE A REASONABLY BETTER CHANCE OF CHOOSING THE CORRECT ANSWER.

ARE THERE QUESTIONS OF ANY NATURE ABOUT THE INSTRUCTIONS YOU HAVE BEEN GIVEN? YOU HAVE 50 MINUTES TO COMPLETE THE TEST.

WHEN YOU HAVE COMPLETED YOUR TEST, TURN IN YOUR TEST BOOKLET, ANSWER SHEET, AND PENCILS. ALL CIRCLES MUST BE COMPLETELY FILLED IN AS DARKLY AS POSSIBLE.

ARE THERE ANY QUESTIONS? (If no questions:) READY, OPEN BOOKLETS, BEGIN.

- - - - -

After 35 minutes have elapsed, say:

YOU HAVE 15 MINUTES IN WHICH TO COMPLETE YOUR EXAMINATION

- - - - -

After 50 minutes have elapsed, say:

STOP, CLOSE YOUR TEST BOOKLET IMMEDIATELY. TURN IN YOUR TEST BOOKLET, ANSWER SHEET, AND PENCILS.

c. Post Administration Instructions

(1) As test materials are turned in by each cadet, **check each answer sheet for completeness to ensure all information has been entered correctly.** See sample answer sheet, TAB A. Pay particular attention to the UIC and the Test Serial Number.

All four numbers must be included in the Test Serial Number. **A single answer sheet completed incorrectly will disqualify that cadet's team.** Ensure that responses are well blackened, that there is only one response blackened out for each question, that erasures are clean, and that there are no unnecessary marks on the answer sheet.

(2) Mail completed answer sheets to CNET (NJROTC) using the form letter in this Appendix, page 5-8, as the cover letter.

(a) Place answer sheets in a file folder, cardboard backing, or other similar protection on the front and back of the forms before mailing. Package must be postmarked not later than the day following test administration.

(b) Please do not send answer sheets for short teams (less than five taking the test, due to the absence of one or more members) as we can only process five-member teams.

(3) Test booklets should not be returned to CNET. There is no objection to returning the test booklets to the students at a later date for review/retention. Test answers will be provided to all competing units after validation of test results.

**SPECIAL NOTE....THE INDIVIDUAL ADMINISTERING THE NATIONAL EXAM SHOULD MAKE EVERY EFFORT TO SEE THAT THE ANSWER SHEETS ARE SUBMITTED VOID OF ANY ERRORS OF TEAM IDENTIFICATION. THE COMPUTER IS PROGRAMMED TO SCORE A FIVE-MEMBER TEAM WHICH SUBMITS ANSWER SHEETS WITH FIVE IDENTICAL UIC NUMBERS, FIVE IDENTICAL TEAM NUMBERS, AND FIVE DIFFERENT TEST BOOKLET NUMBERS. IF YOU FAIL TO CHECK YOUR ANSWER SHEETS CAREFULLY, AND ONE OF THE TEAM MEMBERS HAS INCORRECTLY IDENTIFIED HIS/HER ANSWER SHEET, OR OMITTED ANY OF THE INFORMATION IN THE ABOVE MENTIONED AREAS, THAT ENTIRE TEAM WILL BE DISQUALIFIED. THE CNET STAFF WILL NOT TAKE THE TIME TO HAND CORRECT THE DISCREPANT ANSWER SHEETS. THEY WILL, HOWEVER, MAKE COMPUTER CORRECTIONS FOR THOSE TEAMS WHICH BECOME DISQUALIFIED THROUGH NO FAULT OF THEIR OWN. THE RESPONSIBILITY FOR SUBMITTING ERROR-FREE EXAMINATION SCORE SHEETS LIES WITH THE INDIVIDUAL ADMINISTERING THE EXAM.**

TAB A - Sample NJROTC Answer Sheet (CNET Form 1500/23 (9-94))

TAB B - Sample Letter Used to Forward Answer Sheets

## NJ ROTC ANSWER

SEE IMPORTANT MARKING INSTRUCTIONS ON SIDE 2

CNET Form 1500/23 (9-94) (NAVEDTRA 37086) 0508-LP-480-1800

SIDE 1

LAST NAME		FIRST NAME	MI
A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D
E	E	E	E
F	F	F	F
G	G	G	G
H	H	H	H
I	I	I	I
J	J	J	J
K	K	K	K
L	L	L	L
M	M	M	M
N	N	N	N
O	O	O	O
P	P	P	P
Q	Q	Q	Q
R	R	R	R
S	S	S	S
T	T	T	T
U	U	U	U
V	V	V	V
W	W	W	W
X	X	X	X
Y	Y	Y	Y
Z	Z	Z	Z

TEAM	
1	2
3	4
5	6
7	8
9	0

UIC	
1	2
3	4
5	6
7	8
9	0

TEST SERIAL	
1	2
3	4
5	6
7	8
9	0

1	(A)(B)(C)(D)	11	(A)(B)(C)(D)	21	(A)(B)(C)(D)	31	(A)(B)(C)(D)	41	(A)(B)(C)(D)
2	(A)(B)(C)(D)	12	(A)(B)(C)(D)	22	(A)(B)(C)(D)	32	(A)(B)(C)(D)	42	(A)(B)(C)(D)
3	(A)(B)(C)(D)	13	(A)(B)(C)(D)	23	(A)(B)(C)(D)	33	(A)(B)(C)(D)	43	(A)(B)(C)(D)
4	(A)(B)(C)(D)	14	(A)(B)(C)(D)	24	(A)(B)(C)(D)	34	(A)(B)(C)(D)	44	(A)(B)(C)(D)
5	(A)(B)(C)(D)	15	(A)(B)(C)(D)	25	(A)(B)(C)(D)	35	(A)(B)(C)(D)	45	(A)(B)(C)(D)
6	(A)(B)(C)(D)	16	(A)(B)(C)(D)	26	(A)(B)(C)(D)	36	(A)(B)(C)(D)	46	(A)(B)(C)(D)
7	(A)(B)(C)(D)	17	(A)(B)(C)(D)	27	(A)(B)(C)(D)	37	(A)(B)(C)(D)	47	(A)(B)(C)(D)
8	(A)(B)(C)(D)	18	(A)(B)(C)(D)	28	(A)(B)(C)(D)	38	(A)(B)(C)(D)	48	(A)(B)(C)(D)
9	(A)(B)(C)(D)	19	(A)(B)(C)(D)	29	(A)(B)(C)(D)	39	(A)(B)(C)(D)	49	(A)(B)(C)(D)
10	(A)(B)(C)(D)	20	(A)(B)(C)(D)	30	(A)(B)(C)(D)	40	(A)(B)(C)(D)	50	(A)(B)(C)(D)
51	(A)(B)(C)(D)	61	(A)(B)(C)(D)	71	(A)(B)(C)(D)	81	(A)(B)(C)(D)	91	(A)(B)(C)(D)
52	(A)(B)(C)(D)	62	(A)(B)(C)(D)	72	(A)(B)(C)(D)	82	(A)(B)(C)(D)	92	(A)(B)(C)(D)
53	(A)(B)(C)(D)	63	(A)(B)(C)(D)	73	(A)(B)(C)(D)	83	(A)(B)(C)(D)	93	(A)(B)(C)(D)
54	(A)(B)(C)(D)	64	(A)(B)(C)(D)	74	(A)(B)(C)(D)	84	(A)(B)(C)(D)	94	(A)(B)(C)(D)
55	(A)(B)(C)(D)	65	(A)(B)(C)(D)	75	(A)(B)(C)(D)	85	(A)(B)(C)(D)	95	(A)(B)(C)(D)
56	(A)(B)(C)(D)	66	(A)(B)(C)(D)	76	(A)(B)(C)(D)	86	(A)(B)(C)(D)	96	(A)(B)(C)(D)
57	(A)(B)(C)(D)	67	(A)(B)(C)(D)	77	(A)(B)(C)(D)	87	(A)(B)(C)(D)	97	(A)(B)(C)(D)
58	(A)(B)(C)(D)	68	(A)(B)(C)(D)	78	(A)(B)(C)(D)	88	(A)(B)(C)(D)	98	(A)(B)(C)(D)
59	(A)(B)(C)(D)	69	(A)(B)(C)(D)	79	(A)(B)(C)(D)	89	(A)(B)(C)(D)	99	(A)(B)(C)(D)
60	(A)(B)(C)(D)	70	(A)(B)(C)(D)	80	(A)(B)(C)(D)	90	(A)(B)(C)(D)	100	(A)(B)(C)(D)
101	(A)(B)(C)(D)	111	(A)(B)(C)(D)	121	(A)(B)(C)(D)	131	(A)(B)(C)(D)	141	(A)(B)(C)(D)
102	(A)(B)(C)(D)	112	(A)(B)(C)(D)	122	(A)(B)(C)(D)	132	(A)(B)(C)(D)	142	(A)(B)(C)(D)
103	(A)(B)(C)(D)	113	(A)(B)(C)(D)	123	(A)(B)(C)(D)	133	(A)(B)(C)(D)	143	(A)(B)(C)(D)
104	(A)(B)(C)(D)	114	(A)(B)(C)(D)	124	(A)(B)(C)(D)	134	(A)(B)(C)(D)	144	(A)(B)(C)(D)
105	(A)(B)(C)(D)	115	(A)(B)(C)(D)	125	(A)(B)(C)(D)	135	(A)(B)(C)(D)	145	(A)(B)(C)(D)
106	(A)(B)(C)(D)	116	(A)(B)(C)(D)	126	(A)(B)(C)(D)	136	(A)(B)(C)(D)	146	(A)(B)(C)(D)
107	(A)(B)(C)(D)	117	(A)(B)(C)(D)	127	(A)(B)(C)(D)	137	(A)(B)(C)(D)	147	(A)(B)(C)(D)
108	(A)(B)(C)(D)	118	(A)(B)(C)(D)	128	(A)(B)(C)(D)	138	(A)(B)(C)(D)	148	(A)(B)(C)(D)
109	(A)(B)(C)(D)	119	(A)(B)(C)(D)	129	(A)(B)(C)(D)	139	(A)(B)(C)(D)	149	(A)(B)(C)(D)
110	(A)(B)(C)(D)	120	(A)(B)(C)(D)	130	(A)(B)(C)(D)	140	(A)(B)(C)(D)	150	(A)(B)(C)(D)
151	(A)(B)(C)(D)	161	(A)(B)(C)(D)	171	(A)(B)(C)(D)	181	(A)(B)(C)(D)	191	(A)(B)(C)(D)
152	(A)(B)(C)(D)	162	(A)(B)(C)(D)	172	(A)(B)(C)(D)	182	(A)(B)(C)(D)	192	(A)(B)(C)(D)
153	(A)(B)(C)(D)	163	(A)(B)(C)(D)	173	(A)(B)(C)(D)	183	(A)(B)(C)(D)	193	(A)(B)(C)(D)
154	(A)(B)(C)(D)	164	(A)(B)(C)(D)	174	(A)(B)(C)(D)	184	(A)(B)(C)(D)	194	(A)(B)(C)(D)
155	(A)(B)(C)(D)	165	(A)(B)(C)(D)	175	(A)(B)(C)(D)	185	(A)(B)(C)(D)	195	(A)(B)(C)(D)
156	(A)(B)(C)(D)	166	(A)(B)(C)(D)	176	(A)(B)(C)(D)	186	(A)(B)(C)(D)	196	(A)(B)(C)(D)
157	(A)(B)(C)(D)	167	(A)(B)(C)(D)	177	(A)(B)(C)(D)	187	(A)(B)(C)(D)	197	(A)(B)(C)(D)
158	(A)(B)(C)(D)	168	(A)(B)(C)(D)	178	(A)(B)(C)(D)	188	(A)(B)(C)(D)	198	(A)(B)(C)(D)
159	(A)(B)(C)(D)	169	(A)(B)(C)(D)	179	(A)(B)(C)(D)	189	(A)(B)(C)(D)	199	(A)(B)(C)(D)
160	(A)(B)(C)(D)	170	(A)(B)(C)(D)	180	(A)(B)(C)(D)	190	(A)(B)(C)(D)	200	(A)(B)(C)(D)

SAMPLE LETTER USED TO FORWARD ANSWER SHEETS

DATE \_\_\_\_\_

From: Senior Naval Science Instructor, NJROTC  
Unit \_\_\_\_\_ UIC: \_\_\_\_\_

To: Chief of Naval Education and Training (NJROTC)  
250 Dallas Street  
Pensacola, FL 32508-5220

Subj: NJROTC NATIONAL ACADEMIC EXAM

Encl: (1) Answer sheets

1. Subject test was administered on \_\_\_\_\_ (date) \_\_\_\_\_. Enclosure  
(1) is forwarded for scoring. Team members who participated  
are:

Team No.    Cadet Name

Test Booklet Serial No.

\_\_\_\_\_  
(Signed)  
Senior Naval Science Instructor

Copy to (w/o encl):  
NJROTC Area Manager, Area \_\_\_\_\_

THIS LETTER NEED NOT BE TYPED, BUT IT MUST BE LEGIBLE

(Excerpt) OPNAVINST 6110.1G

10 OCTOBER 2002

**NAVY SCREENING TABLES FOR WEIGHT BY HEIGHT \***

MEN MAXIMUM WEIGHT    HEIGHT (POUNDS)    (INCHES)		WOMEN MAXIMUM WEIGHT (POUNDS)
97	51	102
102	52	106
107	53	110
112	54	114
117	55	118
122	56	123
127	57	127
131	58	131
136	59	136
141	60	141
145	61	145
150	62	149
155	63	152
160	64	156
165	65	160
170	66	163
175	67	167
181	68	170
186	69	174
191	70	177
196	71	181
201	72	185
206	73	189
211	74	194

MEN MAXIMUM		WOMEN MAXIMUM
WEIGHT	HEIGHT	WEIGHT
(POUNDS)	(INCHES)	(POUNDS)
216	75	200
221	76	205
226	77	211
231	78	216
236	79	222
241	80	227
246	81	233
251	82	239
256	83	245
261	84	251
266	85	257
271	87	263

\*The maximum allowable body fat limits are 23% for men and 34% for women. Those who do not meet these standards should refer to OPNAVINST 6110.1G for percent of body fat. Only Navy body fat calculation procedures will be accepted.



**PERSONAL APPEARANCE/BODY FAT  
MEASUREMENTS**

NAME: \_\_\_\_\_ RATE/RANK: \_\_\_\_\_

HEIGHT (IN INCHES): \_\_\_\_\_

WEIGHT: \_\_\_\_\_

NECK MEASUREMENT: \_\_\_\_\_

WAIST MEASUREMENT: \_\_\_\_\_

HIP MEASUREMENT (FEMALES ONLY): \_\_\_\_\_

PERCENT OF BODY FAT: \_\_\_\_\_

DATE: \_\_\_\_\_

\_\_\_\_\_  
HEALTH CARE PROFESSIONAL  
SIGNATURE & STAMP

## **BODY COMPOSITION ASSESSMENT (BCA)**

### **1. Background and Rationale**

a. In 1985, a panel of experts at the National Institute of Health (NIH) determined the extent to which excess body fat is associated with negative health consequences. Negative health consequences include an increased risk of high blood pressure, diabetes, cancer, and cardiovascular disease. Excess body fat is also associated with the inability to maintain physical performance (especially in hot climates) and may be correlated with a lack of fitness and stamina. Although body fat typically increases with age in Americans, it is not a healthy process, and frequently is simply the result of decreased activity and or dietary indiscretion.

b. Based on scientific research the NIH conference defined obesity as the amount of body fat associated with significant detrimental health effects. This corresponded to a weight-for-height 20 percent above the midpoint weight for a medium-frame individual, based on the 1983 Metropolitan Life Insurance Height-Weight Tables. Naval Health Research Center (NHRC) scientists reviewed this and numerous other scientific studies and recommended the NIH definition of obesity as the upper limits for Navy standards. Since DOD prescribes body fat percentage as the measure of body composition, NHRC determined upper allowable Navy limits to correspond to 22 percent for men and 33 percent for women. Most members should have a significantly lower level of body fat than the upper allowable Navy limits.

### **2. Purpose**

a. Provide members with goals to promote basic physical fitness, health, and readiness.

b. Provide command a means of assessing the general fitness of members of command.

3. Maximum Allowable Body Fat Percentages

a. Age-adjusted maximum allowable Navy body fat percentages are

	Age (years)	
	17-39	40-40+
Male	22%	23%
Female	33%	34%

b. Most personnel should have a significantly lower percentage of body fat.

4. BCA Procedures

a. Maximum weight for height screening

(1) Height measurement

(a) Member removes shoes.

(b) Member stands with feet together, flat on the deck, takes a deep breath, and stretches tall.

(c) Record height. Fractions of an inch in height shall be rounded up to the nearest half-inch.

(2) Weight measurement

(a) Member shall be weighed on a balance beam or digital scale in PT-type clothing (shorts, T-shirt) without shoes.

(b) One pound deduction is made for clothing, regardless of how member is dressed.

(c) Record weight. Fractions of a pound in weight shall be rounded down to nearest whole pound.

(3) Maximum weight determination

(a) In center column of maximum-weight-for-height table (appendix A of this enclosure), find smallest value equal to or exceeding member's height.

(b) If member's weight is less than or equal to the maximum weight listed for their gender, members are within body composition assessment standards and percentage body fat determination is not required.

b. Body fat percentage determination

(1) Non-stretching cloth, metal, or fiberglass tape measure shall be applied to body landmarks with sufficient tension to keep it in place following the contour of the body without indenting skin surface. All measurements will be taken on the right side of the body.

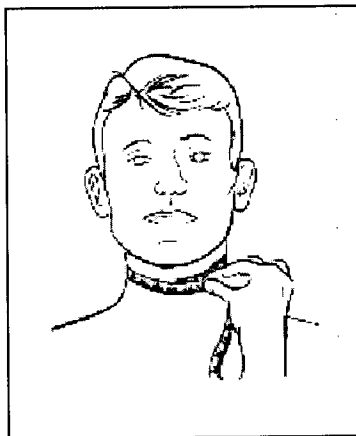
(2) Procedures for Men

(a) Body fat percentage for men is calculated from measurements of standing height, neck circumference, and abdomen circumference.

(b) Members shall be measured in presence of another member (preferably of member's sex), if requested.

(c) Standing height. Use height measurement from maximum weight for height screening.

(d) Neck circumference



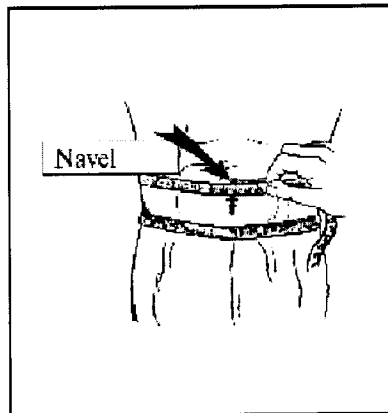
1. Measurement shall be taken on bare skin.

2. Members look straight ahead with shoulders down (not hunched).

3. Measure neck circumference at a point just below larynx (Adam's Apple) perpendicular to long axis of neck.

4. Round neck measurement up to nearest 1/2 inch and record (e.g., round 16 1/4 inches to 16 1/2 inches).

(e) Abdomen circumference



1. Measurement shall be taken on bare skin.

2. Arms are at sides. Take measurement at end of member's normal, relaxed exhalation.

3. Measure abdominal circumference with tape at level of center of navel and parallel to deck.

4. Round abdominal measurement down to nearest 1/2 inch and record (e.g., round 34 3/4 to 34 1/2 inches).

(f) Body fat calculation

1. Subtract neck circumference from abdominal circumference to obtain member's circumference value.

2. On appropriate percent fat estimation table (appendix B of this enclosure) find intersection of column equal to member's height (rounded up to nearest half inch) and row equal to member's circumference value.

3. Member's body fat percentage equals number at intersection of row and column. For circumference value less than value in table, body fat percentage is less than or equal to smallest body fat percentage in column. For circumference value greater than value in table, body fat percentage is greater than or equal to largest body fat percentage in column.

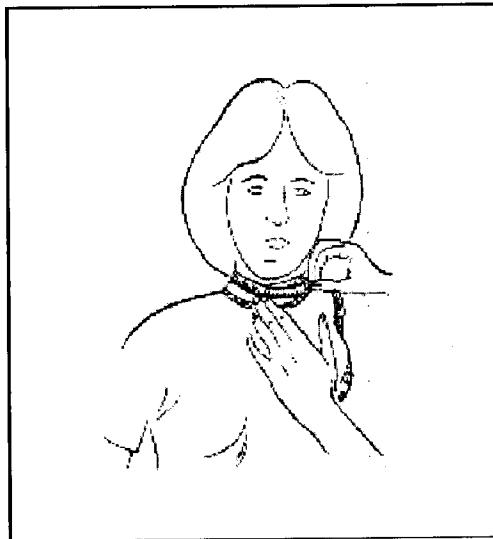
(3) Procedure for Women

(a) Body fat percentage for women is calculated from measurements of standing height, neck circumference, natural waist circumference, and hip circumference.

(b) Members shall be measured in presence of another member (preferably of member's sex), if requested.

(c) Standing height. Use height measurement from maximum weight for height screening.

(d) Neck circumference



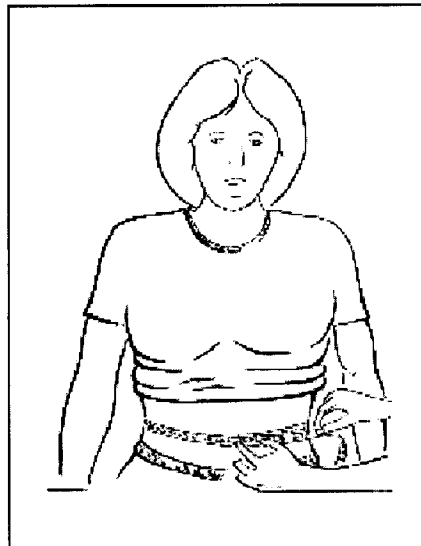
1. Measurement shall be taken on bare skin.

2. Members look straight ahead with shoulders down (not hunched).

3. Measure neck circumference at a point just below larynx (Adam's Apple) perpendicular to long axis of neck.

4. Round neck measurement up to nearest 1/2-inch and record (e.g., round 16 1/4 inches to 16 1/2 inches).

(e) Natural waist circumference



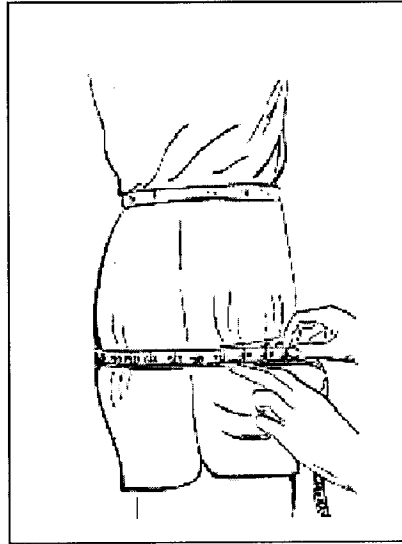
1. Measurement shall be taken on bare skin.

2. Arms are at sides. Take measurement at end of member's normal, relaxed exhalation.

3. Measure natural waist circumference, at point of minimal abdominal circumference with tape level and parallel to deck. (Note: This site is usually located about halfway between navel and lower end of sternum breastbone. When this site is not easily observed, take several measurements at probable sites and use smallest value).

4. Round natural waist measurement down and record to nearest 1/2 inch (e.g., round 28 5/8 inches to 28 1/2 inches).

(f) Hip circumference



1. Measurement shall be taken over lightweight loose-fitting gym shorts or pants. Tight-fitting rubberized foundation garments or exercise belts shall not be worn at least 30 minutes before measuring. Control-top panty hose, spandex tights, and other "shaping" garments shall not be worn during measuring.

2. While facing member's right side measure hip circumference by placing tape around hips so that it passes over greatest protrusion of gluteal muscles (buttocks) as viewed from side. Ensure tape is level and parallel to deck. Apply sufficient tension on tape to minimize effect of clothing.

3. Round hip measurement down to nearest 1/2-inch and record (e.g., round 44 and 3/8 inches to 44 inches).

(g) Body fat calculation

1. Add waist and hip circumferences, then subtract neck circumference to obtain member's circumference value.

2. On appropriate percent fat estimation table (appendix B of this enclosure), find intersection of



column equal to member's height (rounded up to nearest half inch) and row equal to member's circumference value.

3. Member's body fat percentage equals number at intersection of row and column. For circumference value less than value in table, body fat percentage is less than or equal to smallest body fat percentage in column. For circumference value greater than value in table, body fat percentage is greater than or equal to largest body fat percentage in column.

5. Grading BCA

a. BCA is failed (not within BCA standards) when members exceed both maximum weight for height and body fat percentage allowed for member's age and gender.

b. BCA is passed (within BCA standards) when members

(1) exceed maximum weight for height, but not maximum body fat percentage allowed for member's age and gender.

(2) do not exceed maximum weight for height allowed for member's age and gender.

(3) meet or are less than maximum weight for height and maximum body fat percentage allowed for member's age and gender.

10 October 2002

**MAXIMUM WEIGHT FOR HEIGHT SCREENING TABLE****Maximum Weight in Pounds**

<b>Men Maximum Weight (pounds)</b>	<b>Member's Height (Inches) (fractions rounded up to nearest whole inch)</b>	<b>Women Maximum Weight (pounds)</b>
97	51	102
102	52	106
107	53	110
112	54	114
117	55	118
122	56	123
127	57	127
131	58	131
136	59	136
141	60	141
145	61	145
150	62	149
155	63	152
160	64	156
165	65	160
170	66	163
175	67	167
181	68	170
186	69	174
191	70	177
196	71	181
201	72	185
206	73	189
211	74	194
216	75	200
221	76	205
226	77	211
231	78	216
236	79	222
241	80	227
246	81	233
251	82	239
256	83	245
261	84	251
266	85	257
271	86	263

PERCENT FAT ESTIMATION FOR MEN

Circumference Value*	Height (inches)									
	60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	64.0	64.5
13.0	8	8	8	8	7	7	7	7	6	6
13.5	10	9	9	9	9	8	8	8	8	8
14.0	11	11	10	10	10	10	10	9	9	9
14.5	12	12	12	11	11	11	11	11	10	10
15.0	13	13	13	13	12	12	12	12	12	11
15.5	15	14	14	14	14	13	13	13	13	12
16.0	16	15	15	15	15	15	14	14	14	14
16.5	17	17	16	16	16	16	15	15	15	15
17.0	18	18	17	17	17	17	16	16	16	16
17.5	19	19	19	18	18	18	18	17	17	17
18.0	20	20	20	19	19	19	19	18	18	18
18.5	21	21	21	20	20	20	20	19	19	19
19.0	22	22	22	21	21	21	21	20	20	20
19.5	23	23	23	22	22	22	22	21	21	21
20.0	24	24	23	23	23	23	22	22	22	22
20.5	25	25	24	24	24	24	23	23	23	23
21.0	26	26	25	25	25	25	24	24	24	24
21.5	27	26	26	26	26	25	25	25	25	24
22.0	28	27	27	27	27	26	26	26	26	25
22.5	28	28	28	28	27	27	27	27	26	26
23.0	29	29	29	29	28	28	28	28	27	27
23.5	30	30	30	29	29	29	29	28	28	28
24.0	31	31	30	30	30	30	29	29	29	29
24.5	32	31	31	31	31	30	30	30	30	29
25.0	33	32	32	32	31	31	31	31	30	30
25.5	33	33	33	33	32	32	32	31	31	31
26.0	34	34	34	33	33	33	32	32	32	32
26.5	35	35	34	34	34	33	33	33	33	32
27.0	36	35	35	35	34	34	34	34	33	33
27.5	36	36	36	35	35	35	35	34	34	34
28.0	37	37	36	36	36	36	35	35	35	35
28.5	38	37	37	37	37	36	36	36	36	35
29.0	38	38	38	38	37	37	37	37	36	36
29.5	39	39	39	38	38	38	37	37	37	37
30.0	40	39	39	39	39	38	38	38	38	37
30.5	40	40	40	40	39	39	39	39	38	38
31.0	41	41	40	40	40	40	39	39	39	39
31.5	42	41	41	41	41	40	40	40	40	39
32.0	42	42	42	42	41	41	41	40	40	40

\*Circumference value = abdomen circumference - neck circumference (in inches)

**PERCENT FAT ESTIMATION FOR MEN**

Circumference Value*	Height (inches)									
	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	69.0	69.5
13.0	6	6	6	5	5	5	5	5	4	4
13.5	7	7	7	7	6	6	6	6	6	5
14.0	9	8	8	8	8	8	7	7	7	7
14.5	10	10	9	9	9	9	9	8	8	8
15.0	11	11	11	10	10	10	10	10	9	9
15.5	12	12	12	12	11	11	11	11	11	10
16.0	13	13	13	13	13	12	12	12	12	11
16.5	14	14	14	14	14	13	13	13	13	13
17.0	16	15	15	15	15	14	14	14	14	14
17.5	17	16	16	16	16	16	15	15	15	15
18.0	18	17	17	17	17	17	16	16	16	16
18.5	19	18	18	18	18	18	17	17	17	17
19.0	20	19	19	19	19	19	18	18	18	18
19.5	21	20	20	20	20	19	19	19	19	19
20.0	22	21	21	21	21	20	20	20	20	20
20.5	22	22	22	22	22	21	21	21	21	20
21.0	23	23	23	23	22	22	22	22	22	21
21.5	24	24	24	24	23	23	23	23	22	22
22.0	25	25	25	24	24	24	24	24	23	23
22.5	26	26	25	25	25	25	25	24	24	24
23.0	27	27	26	26	26	26	25	25	25	25
23.5	28	27	27	27	27	26	26	26	26	26
24.0	28	28	28	28	27	27	27	27	27	26
24.5	29	29	29	29	28	28	28	28	27	27
25.0	30	30	30	29	29	29	29	28	28	28
25.5	31	31	30	30	30	30	29	29	29	29
26.0	32	31	31	31	31	30	30	30	30	29
26.5	32	32	32	32	31	31	31	31	30	30
27.0	33	33	32	32	32	32	32	31	31	31
27.5	34	33	33	33	33	33	32	32	32	32
28.0	34	34	34	34	33	33	33	33	33	32
28.5	35	35	35	34	34	34	34	33	33	33
29.0	36	36	35	35	35	35	34	34	34	34
29.5	36	36	36	36	35	35	35	35	35	34
30.0	37	37	37	36	36	36	36	35	35	35
30.5	38	38	37	37	37	37	36	36	36	36
31.0	38	38	38	38	37	37	37	37	37	36
31.5	39	39	39	38	38	38	38	37	37	37
32.0	40	39	39	39	39	38	38	38	38	38
32.5	40	40	40	40	39	39	39	39	38	38
33.0	41	41	40	40	40	40	39	39	39	39
33.5	42	41	41	41	41	40	40	40	40	39
34.0	42	42	42	41	41	41	41	40	40	40

\*Circumference value = abdomen circumference - neck circumference (in inches)

PERCENT FAT ESTIMATION FOR MEN

Circumference Value*	Height (inches)									
	70.0	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5
14.0	7	6	6	6	6	6	5	5	5	5
14.5	8	8	7	7	7	7	7	6	6	6
15.0	9	9	9	8	8	8	8	8	7	7
15.5	10	10	10	9	9	9	9	9	9	8
16.0	11	11	11	11	10	10	10	10	10	9
16.5	12	12	12	12	12	11	11	11	11	11
17.0	13	13	13	13	13	12	12	12	12	12
17.5	14	14	14	14	14	13	13	13	13	13
18.0	15	15	15	15	15	14	14	14	14	14
18.5	16	16	16	16	16	15	15	15	15	15
19.0	17	17	17	17	17	16	16	16	16	16
19.5	18	18	18	18	18	17	17	17	17	17
20.0	19	19	19	19	18	18	18	18	18	17
20.5	20	20	20	20	19	19	19	19	19	18
21.0	21	21	21	20	20	20	20	20	19	19
21.5	22	22	22	21	21	21	21	21	20	20
22.0	23	23	22	22	22	22	22	21	21	21
22.5	24	23	23	23	23	23	22	22	22	22
23.0	25	24	24	24	24	23	23	23	23	23
23.5	25	25	25	25	24	24	24	24	24	23
24.0	26	26	26	25	25	25	25	25	24	24
24.5	27	27	26	26	26	26	26	25	25	25
25.0	28	27	27	27	27	27	26	26	26	26
25.5	28	28	28	28	28	27	27	27	27	27
26.0	29	29	29	29	28	28	28	28	27	27
26.5	30	30	29	29	29	29	29	28	28	28
27.0	31	30	30	30	30	30	29	29	29	29
27.5	31	31	31	31	30	30	30	30	30	29
28.0	32	32	32	31	31	31	31	31	30	30
28.5	33	33	32	32	32	32	31	31	31	31
29.0	33	33	33	33	33	32	32	32	32	31
29.5	34	34	34	33	33	33	33	33	32	32
30.0	35	35	34	34	34	34	33	33	33	33
30.5	35	35	35	35	35	34	34	34	34	33
31.0	36	36	36	35	35	35	35	34	34	34
31.5	37	36	36	36	36	36	35	35	35	35
32.0	37	37	37	37	36	36	36	36	36	35
32.5	38	38	37	37	37	37	37	36	36	36
33.0	39	38	38	38	38	37	37	37	37	37
33.5	39	39	39	38	38	38	38	38	37	37
34.0	40	39	39	39	39	39	38	38	38	38
34.5	40	40	40	40	39	39	39	39	39	38
35.0	41	41	40	40	40	40	40	39	39	39

\*Circumference value = abdomen circumference - neck circumference (in inches)

PERCENT FAT ESTIMATION FOR MEN

Circumference Value*	HEIGHT (inches)									
	75.0	75.5	76.0	76.5	77.0	77.5	78.0	78.5	79.0	79.5
15.0	7	7	7	6	6	6	6	6	6	5
15.5	8	8	8	8	7	7	7	7	7	6
16.0	9	9	9	9	9	8	8	8	8	8
16.5	10	10	10	10	10	9	9	9	9	9
17.0	11	11	11	11	11	10	10	10	10	10
17.5	12	12	12	12	12	11	11	11	11	11
18.0	13	13	13	13	13	12	12	12	12	12
18.5	14	14	14	14	14	13	13	13	13	13
19.0	15	15	15	15	15	14	14	14	14	14
19.5	16	16	16	16	16	15	15	15	15	15
20.0	17	17	17	17	16	16	16	16	16	16
20.5	18	18	18	18	17	17	17	17	17	16
21.0	19	19	19	18	18	18	18	18	18	17
21.5	20	20	20	19	19	19	19	19	18	18
22.0	21	21	20	20	20	20	20	19	19	19
22.5	22	21	21	21	21	20	20	20	20	20
23.0	22	22	22	22	22	21	21	21	21	21
23.5	23	23	23	23	22	22	22	22	22	21
24.0	24	24	24	23	23	23	23	23	22	22
24.5	25	25	24	24	24	24	24	23	23	23
25.0	26	25	25	25	25	25	24	24	24	24
25.5	26	26	26	26	26	25	25	25	25	25
26.0	27	27	27	26	26	26	26	26	25	25
26.5	28	28	27	27	27	27	27	26	26	26
27.0	28	28	28	28	28	27	27	27	27	27
27.5	29	29	29	29	28	28	28	28	28	27
28.0	30	30	29	29	29	29	29	28	28	28
28.5	31	30	30	30	30	30	29	29	29	29
29.0	31	31	31	31	30	30	30	30	30	29
29.5	32	32	31	31	31	31	31	30	30	30
30.0	33	32	32	32	32	32	31	31	31	31
30.5	33	33	33	33	32	32	32	32	32	31
31.0	34	34	33	33	33	33	33	32	32	32
31.5	34	34	34	34	34	33	33	33	33	33
32.0	35	35	35	34	34	34	34	34	33	33
32.5	36	35	35	35	35	35	34	34	34	34
33.0	36	36	36	35	35	35	35	35	35	34
33.5	37	37	36	36	36	36	36	35	35	35
34.0	37	37	37	37	37	36	36	36	36	36
34.5	38	38	38	37	37	37	37	37	36	36
35.0	39	38	38	38	38	38	37	37	37	37
35.5	39	39	39	39	38	38	38	38	38	37
36.0	40	40	39	39	39	39	39	38	38	38
36.5	40	40	40	40	39	39	39	39	39	38
37.0	41	41	40	40	40	40	40	39	39	39
37.5	41	41	41	41	41	40	40	40	40	40

\*Circumference value = abdomen circumference - neck circumference (in inches)

**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	HEIGHT (Inches)									
	58.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5
35.5	4	4	3	3	3	2	2	2	1	1
36.0	5	4	4	4	3	3	3	2	2	2
36.5	6	5	5	5	4	4	4	3	3	3
37.0	7	6	6	5	5	5	4	4	4	4
37.5	7	7	7	6	6	6	5	5	5	4
38.0	8	8	8	7	7	7	6	6	6	5
38.5	9	9	8	8	8	7	7	7	6	6
39.0	10	10	9	9	9	8	8	8	7	7
39.5	11	10	10	10	9	9	9	8	8	8
40.0	12	11	11	10	10	10	9	9	9	8
40.5	12	12	12	11	11	11	10	10	10	9
41.0	13	13	12	12	12	11	11	11	10	10
41.5	14	14	13	13	13	12	12	12	11	11
42.0	15	14	14	14	13	13	13	12	12	12
42.5	16	15	15	14	14	14	13	13	13	12
43.0	16	16	16	15	15	15	14	14	14	13
43.5	17	17	16	16	16	15	15	15	14	14
44.0	18	18	17	17	16	16	16	15	15	15
44.5	19	18	18	18	17	17	16	16	16	15
45.0	19	19	19	18	18	18	17	17	17	16
45.5	20	20	19	19	19	18	18	18	17	17
46.0	21	21	20	20	19	19	19	18	18	18
46.5	22	21	21	21	20	20	19	19	19	18
47.0	22	22	22	21	21	21	20	20	19	19
47.5	23	23	22	22	22	21	21	21	20	20
48.0	24	23	23	23	22	22	22	21	21	21
48.5	25	24	24	23	23	23	22	22	22	21
49.0	25	25	24	24	24	23	23	23	22	22
49.5	26	26	25	25	24	24	24	23	23	23
50.0	27	26	26	25	25	25	24	24	24	23
50.5	27	27	27	26	26	25	25	25	24	24
51.0	28	28	27	27	27	26	26	25	25	25
51.5	29	28	28	28	27	27	26	26	26	25
52.0	29	29	29	28	28	28	27	27	26	26
52.5	30	30	29	29	29	28	28	27	27	27
53.0	31	30	30	30	29	29	28	28	28	27
53.5	31	31	31	30	30	30	29	29	28	28
54.0	32	32	31	31	31	30	30	29	29	29
54.5	33	32	32	32	31	31	30	30	30	29
55.0	33	33	33	32	32	31	31	31	30	30
55.5	34	34	33	33	32	32	32	31	31	31
56.0	35	34	34	34	33	33	32	32	32	31
56.5	35	35	35	34	34	33	33	33	32	32
57.0	36	36	35	35	34	34	34	33	33	33
57.5	37	36	36	35	35	35	34	34	34	33
58.0	37	37	36	36	36	35	35	35	34	34
58.5	38	37	37	37	36	36	36	35	35	34

**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	Height (Inches)									
	58.0	58.5	59.0	59.5	60.0	60.5	61.0	61.5	62.0	62.5
59.0	38	38	38	37	37	37	36	36	35	35
59.5	39	39	38	38	38	37	37	36	36	36
60.0	40	39	39	39	38	38	37	37	37	36
60.5	40	40	40	39	39	38	38	38	37	37
61.0	41	41	40	40	39	39	39	38	38	37
61.5	42	41	41	40	40	40	39	39	38	38
62.0	42	42	41	41	41	40	40	39	39	39
62.5	43	42	42	42	41	41	40	40	40	39
63.0	43	43	43	42	42	41	41	41	40	40
63.5	44	43	43	43	42	42	42	41	41	40
64.0	44	44	44	43	43	42	42	42	41	41
64.5	45	45	44	44	43	43	43	42	42	42
65.0	46	45	45	44	44	44	43	43	42	42
65.5	46	46	45	45	45	44	44	43	43	43
66.0	47	46	46	46	45	45	44	44	44	43
66.5	47	47	47	46	46	45	45	45	44	44
67.0	48	48	47	47	46	46	46	45	45	44
67.5	49	48	48	47	47	46	46	46	45	45
68.0	49	49	48	48	47	47	47	46	46	46
* Circumference value = natural waist + hip - neck circumference (in inches)										



**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	Height (inches)									
	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5
36.0	1	1	1	1	-	-	-	-	-	-
36.5	2	2	2	1	1	1	-	-	-	-
37.0	3	3	3	2	2	2	1	1	1	-
37.5	4	4	3	3	3	2	2	2	2	1
38.0	5	5	4	4	4	3	3	3	2	2
38.5	6	5	5	5	4	4	4	4	3	3
39.0	7	6	6	6	5	5	5	4	4	4
39.5	7	7	7	6	6	6	5	5	5	5
40.0	8	8	8	7	7	7	6	6	6	5
40.5	9	9	8	8	8	7	7	7	6	6
41.0	10	9	9	9	8	8	8	8	7	7
41.5	11	10	10	10	9	9	9	8	8	8
42.0	11	11	11	10	10	10	9	9	9	8
42.5	12	12	11	11	11	10	10	10	10	9
43.0	13	13	12	12	12	11	11	11	10	10
43.5	14	13	13	13	12	12	12	11	11	11
44.0	14	14	14	13	13	13	12	12	12	12
44.5	15	15	14	14	14	14	13	13	13	12
45.0	16	16	15	15	15	14	14	14	13	13
45.5	17	16	16	16	15	15	15	14	14	14
46.0	17	17	17	16	16	16	15	15	15	14
46.5	18	18	17	17	17	16	16	16	15	15
47.0	19	18	18	18	17	17	17	17	16	16
47.5	20	19	19	19	18	18	18	17	17	17
48.0	20	20	20	19	19	19	18	18	18	17
48.5	21	21	20	20	20	19	19	19	18	18
49.0	22	21	21	21	20	20	20	19	19	19
49.5	22	22	22	21	21	21	20	20	20	19
50.0	23	23	22	22	22	21	21	21	20	20
50.5	24	23	23	23	22	22	22	21	21	21
51.0	24	24	24	23	23	23	22	22	22	21
51.5	25	25	24	24	24	23	23	23	22	22
52.0	26	25	25	25	24	24	24	23	23	23
52.5	26	26	26	25	25	25	24	24	24	23
53.0	27	27	26	26	26	25	25	25	24	24
53.5	28	27	27	27	26	26	26	25	25	25
54.0	28	28	28	27	27	27	26	26	26	25
54.5	29	29	28	28	28	27	27	27	26	26
55.0	30	29	29	29	28	28	28	27	27	27
55.5	30	30	30	29	29	29	28	28	28	27
* Circumference value = natural waist + hip - neck circumference (in inches)										

**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	Height (inches)									
	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5
56.0	31	31	30	30	30	29	29	29	28	28
56.5	32	31	31	31	30	30	29	29	29	28
57.0	32	32	31	31	31	30	30	30	29	29
57.5	33	32	32	32	31	31	31	30	30	30
58.0	33	33	33	32	32	32	31	31	31	30
58.5	34	34	33	33	33	32	32	32	31	31
59.0	35	34	34	34	33	33	33	32	32	32
59.5	35	35	35	34	34	33	33	33	32	32
60.0	36	36	35	35	34	34	34	33	33	33
60.5	36	36	36	35	35	35	34	34	34	33
61.0	37	37	36	36	36	35	35	35	34	34
61.5	38	37	37	37	36	36	36	35	35	35
62.0	38	38	38	37	37	36	36	36	35	35
62.5	39	38	38	38	37	37	37	36	36	36
63.0	39	39	39	38	38	38	37	37	37	36
63.5	40	40	39	39	39	38	38	38	37	37
64.0	41	40	40	40	39	39	38	38	38	37
64.5	41	41	40	40	40	39	39	39	38	38
65.0	42	41	41	41	40	40	40	39	39	39
65.5	42	42	42	41	41	40	40	40	39	39
66.0	43	43	42	42	41	41	41	40	40	40
66.5	43	43	43	42	42	42	41	41	41	40
67.0	44	44	43	43	43	42	42	41	41	41
67.5	45	44	44	43	43	43	42	42	42	41
68.0	45	45	44	44	44	43	43	43	42	42
68.5	46	45	45	45	44	44	43	43	43	42
69.0	46	46	45	45	45	44	44	44	43	43
69.5	47	46	46	46	45	45	45	44	44	43
70.0	47	47	47	46	46	45	45	45	44	44
70.5	48	47	47	47	46	46	46	45	45	45
71.0	48	48	48	47	47	47	46	46	45	45

\* Circumference value = natural waist + hip - neck circumference (in inches)

**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	Height (inches)									
	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	72.5
38.0	2	2	1	1	1	-	-	-	-	-
38.5	3	2	2	2	2	1	1	1	-	-
39.0	3	3	3	3	2	2	2	1	1	1
39.5	4	4	4	3	3	3	3	2	2	2
40.0	5	5	4	4	4	4	3	3	3	3
40.5	6	6	5	5	5	4	4	4	4	3
41.0	7	6	6	6	5	5	5	5	4	4
41.5	7	7	7	7	6	6	6	5	5	5
42.0	8	8	8	7	7	7	6	6	6	6
42.5	9	9	8	8	8	7	7	7	7	6
43.0	10	9	9	9	9	8	8	8	7	7
43.5	10	10	10	10	9	9	9	8	8	8
44.0	11	11	11	10	10	10	9	9	9	9
44.5	12	12	11	11	11	10	10	10	10	9
45.0	13	12	12	12	11	11	11	11	10	10
45.5	13	13	13	13	12	12	12	11	11	11
46.0	14	14	14	13	13	13	12	12	12	11
46.5	15	15	14	14	14	13	13	13	12	12
47.0	16	15	15	15	14	14	14	13	13	13
47.5	16	16	16	15	15	15	14	14	14	14
48.0	17	17	16	16	16	15	15	15	15	14
48.5	18	17	17	17	16	16	16	16	15	15
49.0	18	18	18	17	17	17	17	16	16	16
49.5	19	19	18	18	18	18	17	17	17	16
50.0	20	19	19	19	18	18	18	18	17	17
50.5	20	20	20	19	19	19	19	18	18	18
51.0	21	21	20	20	20	20	19	19	19	18
51.5	22	21	21	21	20	20	20	20	19	19
52.0	22	22	22	21	21	21	21	20	20	20
52.5	23	23	22	22	22	21	21	21	21	20
53.0	24	23	23	23	22	22	22	22	21	21
53.5	24	24	24	23	23	23	22	22	22	22
54.0	25	25	24	24	24	23	23	23	23	22
54.5	26	25	25	25	24	24	24	23	23	23
55.0	26	26	26	25	25	25	24	24	24	23
55.5	27	27	26	26	26	25	25	25	24	24
56.0	28	27	27	27	26	26	26	25	25	25

\* Circumference value = natural waist + hip - neck circumference (in inches)

**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	Height (inches)									
	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	72.5
56.5	28	28	28	27	27	27	26	26	26	25
57.0	29	28	28	28	27	27	27	27	26	26
57.5	29	29	29	28	28	28	27	27	27	27
58.0	30	30	29	29	29	28	28	28	27	27
58.5	31	30	30	30	29	29	29	28	28	28
59.0	31	31	31	30	30	30	29	29	29	28
59.5	32	31	31	31	31	30	30	30	29	29
60.0	32	32	32	31	31	31	30	30	30	30
60.5	33	33	32	32	32	31	31	31	30	30
61.0	34	33	33	33	32	32	32	31	31	31
61.5	34	34	34	33	33	33	32	32	32	31
62.0	35	34	34	34	33	33	33	32	32	32
62.5	35	35	35	34	34	34	33	33	33	32
63.0	36	36	35	35	35	34	34	34	33	33
63.5	36	36	36	35	35	35	35	34	34	34
64.0	37	37	36	36	36	35	35	35	34	34
64.5	38	37	37	37	36	36	36	35	35	35
65.0	38	38	38	37	37	37	36	36	36	35
65.5	39	38	38	38	37	37	37	36	36	36
66.0	39	39	39	38	38	38	37	37	37	36
66.5	40	40	39	39	39	38	38	38	37	37
67.0	40	40	40	39	39	39	38	38	38	37
67.5	41	41	40	40	40	39	39	39	38	38
68.0	42	41	41	40	40	40	40	39	39	39
68.5	42	42	41	41	41	40	40	40	39	39
69.0	43	42	42	42	41	41	41	40	40	40
69.5	43	43	42	42	42	41	41	41	40	40
70.0	44	43	43	43	42	42	42	41	41	41
70.5	44	44	44	43	43	43	42	42	42	41
71.0	45	44	44	44	43	43	43	42	42	42
71.5	45	45	45	44	44	44	43	43	43	42
72.0	46	45	45	45	44	44	44	43	43	43
72.5	46	46	46	45	45	45	44	44	44	43
73.0	47	46	46	46	45	45	45	44	44	44
73.5	47	47	47	46	46	46	45	45	45	44
74.0	48	48	47	47	46	46	46	45	45	45
* Circumference value = natural waist + hip - neck circumference (in inches)										

**PERCENT FAT ESTIMATION FOR WOMEN**

Circumference Value*	Height (inches)									
	73.0	73.5	74.0	74.5	75.0	75.5	76.0	76.5	77.0	77.5
39.5	1	1	1	1	-	-	-	-	-	-
40.0	2	2	2	1	1	1	1	-	-	-
40.5	3	3	2	2	2	2	1	1	1	1
41.0	4	4	3	3	3	2	2	2	2	1
41.5	5	4	4	4	3	3	3	3	2	2
42.0	5	5	5	5	4	4	4	3	3	3
42.5	6	6	6	5	5	5	4	4	4	4
43.0	7	7	6	6	6	5	5	5	5	4
43.5	8	7	7	7	6	6	6	6	5	5
44.0	8	8	8	7	7	7	7	6	6	6
44.5	9	9	8	8	8	8	7	7	7	7
45.0	10	9	9	9	9	8	8	8	8	7
45.5	10	10	10	10	9	9	9	9	8	8
46.0	11	11	11	10	10	10	10	9	9	9
46.5	12	12	11	11	11	11	10	10	10	9
47.0	13	12	12	12	11	11	11	11	10	10
47.5	13	13	13	12	12	12	12	11	11	11
48.0	14	14	13	13	13	13	12	12	12	12
48.5	15	14	14	14	14	13	13	13	12	12
49.0	15	15	15	15	14	14	14	13	13	13
49.5	16	16	15	15	15	15	14	14	14	14
50.0	17	16	16	16	16	15	15	15	14	14
50.5	17	17	17	17	16	16	16	15	15	15
51.0	18	18	17	17	17	17	16	16	16	16
51.5	19	18	18	18	18	17	17	17	16	16
52.0	19	19	19	18	18	18	18	17	17	17
52.5	20	20	19	19	19	19	18	18	18	17
53.0	21	20	20	20	19	19	19	19	18	18
53.5	21	21	21	20	20	20	20	19	19	19
54.0	22	22	21	21	21	20	20	20	20	19
54.5	23	22	22	22	21	21	21	21	20	20
55.0	23	23	23	22	22	22	21	21	21	21
55.5	24	23	23	23	23	22	22	22	21	21
56.0	24	24	24	24	23	23	23	22	22	22
56.5	25	25	24	24	24	24	23	23	23	22
57.0	26	25	25	25	24	24	24	24	23	23
* Circumference value = natural waist + hip - neck circumference (in inches)										

PERCENT FAT ESTIMATION FOR WOMEN

Circumference Value*	Height (inches)									
	73.0	73.5	74.0	74.5	75.0	75.5	76.0	76.5	77.0	77.5
57.5	26	26	26	25	25	25	24	24	24	24
58.0	27	27	26	26	26	25	25	25	25	24
58.5	27	27	27	27	26	26	26	25	25	25
59.0	28	28	27	27	27	27	26	26	26	25
59.5	29	28	28	28	27	27	27	27	26	26
60.0	29	29	29	28	28	28	27	27	27	27
60.5	30	30	29	29	29	28	28	28	27	27
61.0	30	30	30	29	29	29	29	28	28	28
61.5	31	31	30	30	30	29	29	29	29	28
62.0	32	31	31	31	30	30	30	29	29	29
62.5	32	32	32	31	31	31	30	30	30	29
63.0	33	32	32	32	31	31	31	31	30	30
63.5	33	33	33	32	32	32	31	31	31	31
64.0	34	34	33	33	33	32	32	32	31	31
64.5	34	34	34	33	33	33	33	32	32	32
65.0	35	35	34	34	34	33	33	33	33	32
65.5	35	35	35	35	34	34	34	33	33	33
66.0	36	36	35	35	35	35	34	34	34	33
66.5	37	36	36	36	35	35	35	34	34	34
67.0	37	37	37	36	36	36	35	35	35	34
67.5	38	37	37	37	36	36	36	36	35	35
68.0	38	38	38	37	37	37	36	36	36	35
68.5	39	38	38	38	38	37	37	37	36	36
69.0	39	39	39	38	38	38	37	37	37	37
69.5	40	40	39	39	39	38	38	38	37	37
70.0	40	40	40	39	39	39	38	38	38	38
70.5	41	41	40	40	40	39	39	39	38	38
71.0	41	41	41	40	40	40	40	39	39	39
71.5	42	42	41	41	41	40	40	40	39	39
72.0	42	42	42	41	41	41	41	40	40	40
72.5	43	43	42	42	42	41	41	41	40	40
73.0	43	43	43	43	42	42	42	41	41	41
73.5	44	44	43	43	43	42	42	42	41	41
74.0	44	44	44	44	43	43	43	42	42	42
* Circumference value = natural waist + hip - neck circumference (in inches)										

OTHER DUE DATE	DUE TO AREA MANAGER*	DUE TO CNET
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### ANNUAL COMPETITIONS

NATIONAL ACADEMIC COMPETITION

1 February  
(Reschedule as directed by AM)

1 March

SECNAV AIR RIFLE COMPETITION

Targets to AM  
18 December or  
as directed by AM

15 January  
to CNET or  
Scoring agency

NATIONAL DRILL MEET

1st week April  
As directed by CNET

### ANNUAL AWARDS

**FOR CADETS:** (Requirements for each contained in CNETINST 1533.9K, Chapter IX)

JOSEPH C. GILLIAM ACADEMIC ACHIEVEMENT AWARD (1 per Area)

As directed by AM

15 February

THE RETIRED OFFICERS ASSOCIATION (TROA) ROTC MEDAL (1 per Unit)  
(Nomination to local chapter or to HQ in Virginia.)

NA

NA

SONS OF THE AMERICAN REVOLUTION (SAR) AWARD (1 per Unit)  
(Nomination to state SAR organization)

NA

NA

DAEDALIAN JUNIOR ROTC ACHIEVEMENT AWARD (1 per Unit)  
(Request 90 days in advance from AMVETS National HQ in Maryland)

NA

NA

AMERICAN VETERANS JROTC AWARD  
(Submit Nomination 6 wks in advance)

NA

NA

STEPHEN DECATUR AWARD  
(Nomination to Surface Navy Assoc.)

1 April

	OTHER DUE DATE	DUE TO AREA MANAGER*	DUE TO CNET
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SCOTTISH RITE AWARD (Nomination at any time during the calendar year to nearest Scottish Rite Valley or call National HQ 202-232-3579)	NA	NA	NA
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NONCOMMISSIONED OFFICERS ASSOCIATION AWARD (Nomination at any time during the calendar year to NCOA: POC Mr. Chambers at 602-973-4743)			
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LEGION OF VALOR AWARD	1 May		1 July
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NATIONAL SOJOURNERS AWARD (Nomination to local chapter or HQ in Virginia)	January		
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**FOR UNITS:**

NAVY LEAGUE BEST UNIT AWARD			30 April
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NAVY LEAGUE MOST IMPROVED UNIT AWARD			30 April
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DISTINGUISHED UNIT AWARD (Submitted by Area Manager) (30% of the units in each Area will be selected – 2/3 of those with Academic Honors may nominate additional cadets to the academies.)	1 December		1 May
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**FOR INSTRUCTORS:**

Instructor Retirement Citation			15 April
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**SCHOLARSHIPS**

NAVY-MARINE CORPS ROTC COLLEGE SCHOLARSHIPS SECOND LOOK FORM			1 October
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CIVILIAN MARKSMANSHIP SCHOLARSHIP			1st week March as directed
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OTHER DUE DATE	DUE TO AREA MANAGER*	DUE TO CNET
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REPORTS FROM UNITS

ENROLLMENT REPORT (JUMS TO AM)	1 October	7 October
END OF YEAR REPORT	1 February	7 February
FINANCIAL REPORT (CNET Form 7300/4)	1 June	1 September
GRADUATION REPORT (JUMS TO AM)	As directed by AM	1 July
INSTRUCTIONAL MATERIALS REPORT (New guidance forthcoming – units will order as needed not to exceed allowances.)	15 February	
OFF-SITE INSPECTION REPORT (CNET 1533/103) (Semi-annual)	NLT 15 February	NLT 1 May
INSTRUCTOR EVALUATION REPORT (CNET 1610/2) SNSI completes form for NSI(s) Area Manager completes form for SNSI	Annual and Off-Site Inspection	30-days after Inspection
INSTRUCTOR OBSERVATION REPORT (CNET 1610/5) (School Administration Evaluation may be substituted) (Either must be signed by school official.)	Off-Site Inspection	
INSTRUCTOR APPEARANCE/BODY FAT MEASUREMENTS FORM (CNET 6110/5) (Must be completed by school health care professional or physician.)	Off-Site Inspection (Annual Inspection if exceed ht/wt standard)	
JROTC INSTRUCTOR ANNUAL CERTIFICATION OF PAY AND DATA FORM (Submit directly to CNET CODE OTE6/08522, use DD2767)		1 May (existing instructors) IMMEDIATE (initial hire)
RETIREE ACCOUNT STATEMENT DFAS-CL 7220/148		1 January (existing instructors) IMMEDIATE (initial hire)

OTHER DUE DATE	DUE TO AREA MANAGER*	DUE TO CNET
SAFETY REPORT (CNET Form 5100/2 or e-mail)	IMMEDIATE	IMMEDIATE
SITUATION REPORTS	IMMEDIATE	IMMEDIATE
SPECIAL INCIDENT REPORTS	IMMEDIATE	IMMEDIATE
UNIT DIRECTORY UPDATE	As necessary	As necessary
WALL-TO-WALL INVENTORY MINOR PROPERTY CLOTHING		15 April
ACCOUNTING/ REQUISITIONED ITEMS	Male Uniforms 31 December Female Uniforms 31 March Organizational Supplies 30 June CNET Report 7100-2 10 September	

#### AREA MANAGERS

AREA MANAGER INSPECTION/ASSIST VISIT SCHEDULE	15 September
UNUSED AREA MANAGER FUNDS	31 August
ANNUAL BUDGET REQUIREMENT	1 October
EMPLOYMENT CHANGES REPORT	IMMEDIATE
ANNUAL HISTORY INPUT REPORT	10 January
MINI BOOT CAMP/LEADERSHIP ACADEMY SCHEDULE	As directed
AREA MANAGER INSPECTION REPORT	30 days after inspection
NAVAL HONOR SCHOOLS PROGRAM	1 May

OTHER DUE DATE	DUE TO AREA MANAGER*	DUE TO CNET
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REPORTS FROM HOST HIGH SCHOOL

SNS/NSI EMPLOYMENT CHANGES	IMMEDIATE	IMMEDIATE
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INSTRUCTOR TRAINING

Course/Training	Dates	Ltr/Continuing Education Credit
NEW INSTRUCTOR ORIENTATION TRAINING	3rd week of July	YES
ANNUAL AREA IN-SERVICE TRAINING	As directed by AM	YES

CONFERENCES

AREA MANAGERS CONFERENCE	1st week January Directed by CNET
INFORMATION TECHNOLOGY CONFERENCE	2nd or 3rd week January Directed by CNET
CURRICULUM ADVISORY COMMITTEE	Semi-annual (March/October) Directed by CNET
AREA ASSISTANTS CONFERENCE	March/April Directed by CNET